

(Two years later, Chuck Yeager in the X-1 rocket plane broke the sonic barrier and 8 years later in 1953, the F-100, the first supersonic jet-powered combat aircraft, was flown.)

"(c) There would be improvements in guidance, navigation and radar which would lead to all-weather flying and the ability to recognize the target and hit it accurately." (This is readily possible but I must say still only partially realized.)

"(d) We would have long-range pilotless aircraft." (In 1953, 8 years later, the Snark first flew.)

"(e) We would have intercontinental ballistic missiles and intermediate-range ballistic missiles." (Twelve years later, in 1957, we had the Thor and the Atlas.)

"(f) We would have earth satellites." (Russia had them in 1957; we, in 1958.)

"2. We must have proper balance between manned and automatic weapons' systems." (Incidentally, as Senator Goldwater intimated, that argument is still going on. The answer to me is very simple—we need both.)

"3. We can and must have air mobility to move whole armies, complete with equipment, anywhere on earth." (We still can, and must, but such an airplane is not yet available.)

"4. Communications, command, and control in the new era will be all-important." (While great improvements have been made, this problem is also not yet solved.)

This report was truly prophetic, but there is much left to be done to fulfill its prophecy. Last year Gen. C. E. LeMay directed Gen. B. A. Schriever to evaluate the military potential of science and technology as related to Air Force requirements extended into the mid-seventies. That is, he requested another 10-year prediction. This resulted in Project Forecast. The best talent in and out of the Air Force was used to prepare this report. The Army, the Navy, and the Marines participated. In addition, 10 Federal agencies, 70 industrial concerns, 10 non-profit organizations, and 26 colleges and universities took part in the preparation of the report.

In the study, the primary goal was to assure controlled and flexible response at all levels of conflict. In other words, we must remain sufficiently strong, militarily, to deter all-out war. If smaller wars become more likely, we must be able, hopefully, to deter them and if we cannot deter, then to prevail.

The report considered first the future threat; that is, Communist objectives and capabilities. A very important part of the future threat is Russian technology. The excellence of Russian technology is indicated by their considerable accomplishments in the nuclear energy, missile and space fields and, of course, in the importance and high priority they give to their technological efforts. They are presently turning out more scientists and engineers than we. I do not believe they are turning out better scientists and engineers, but they are turning out more and some of them are very good indeed. It is interesting to note that the number of their technical institutions increased by 50 percent between the years 1955 and 1960.

The report considered national policy and the requirements and restraints it imposes on military planning and operations.

It considered technological opportunities. There were 12 technical panels. They covered the most important aspects of Air Force technology.

And, finally, it considered capability. There were panels on general war, limited war, continental defense, intelligence and reconnaissance and support; logistics. These were all tied together with a cost analysis panel, an integration panel, and an evaluation panel.

The technical opportunities considered included:

"1. Materials:

"(a) Among the most promising new materials are metallic fibers with plastic binders. They are much lighter, stronger, and stiffer than structural steel.

"(b) Metals with dispersed oxides. They permit strength retention to much higher temperatures than the best heat resistant metals.

"2. Propulsion: With the new materials and new techniques, we are able to have higher tip speeds, higher temperatures, reduce weight per unit of thrust and reduce specific fuel consumption. This makes possible vertical-lift engines, very long-range engines, and hydrogen-fuel engines. The advantage of a hydrogen-fuel engine is that the jet engine fueled with hydrogen is usable up to about mach 6 around 4,000 miles per hour, whereas with conventional fuel it is only possible, in the light of present knowledge, to go to about mach 3, or 2,000 miles per hour.

"3. Aerodynamic development: Two important developments are laminar flow, which reduces drag—gives more range—the first flight was made in 1954—10 years ago and far too little has been done on this in the interim and variable geometry aircraft. That is, aircraft in which the wings were able to change their sweep in flight. This permits efficient operations at high speeds, at low speeds, at high altitudes, and at low altitudes." (Incidentally, the first variable sweep wing airplane was built in 1951—13 years ago and now the next ones will probably be the TFX, of which you have heard considerable controversy, and possibly the new supersonic transport.)

"4. Special weapons: That is, nuclear weapons. We need smaller weapons. We need cleaner weapons so that we can take out precise targets and reduce collateral damage.

"5. Guidance: Better gyros, terminal guidance, and matching will lead to ICBM's with CEP's, that is, miss distances only a small fraction of the present, and will lead to hitting missiles with CEP's measured in feet at ranges of 10 to 50 miles."

A word about capabilities—what can we have from these technical advances provided we exploit them aggressively? There are eight important possibilities:

1. One is the AMPSS—the Advanced Manned Precision Strike System. That is, a manned bomber with controlled capability. (I would point out that the last B52 was delivered 3 years ago in 1961. 744 were delivered in 10 years.)

2. Very accurate ICBM's. These would be counterforce weapons as opposed to counter-value weapons. A counterforce weapon is a weapon of improved accuracy with which you can selectively take out the enemy's military strength; a counter-value weapon is a city-busting weapon.

3. The hitting air to ground missile of which I spoke—very precise. A limited war weapon to take out bridges, etc., anything that the Army wants taken out.

4. A VTOL fighter. That is, a vertical take-off and landing strike reconnaissance aircraft for army support. (The first VTOL aircraft was built 8 years ago in 1956. There, again, we have made some progress but nowhere near as much as we should.)

5. A VTOL light transport to support the ground forces.

6. A CXX which is a large cargo aircraft. I would estimate that this would be perhaps two times as big as the biggest airplane flying today. It could go halfway around the world without refueling. It could move armies, complete with their equipment, as advocated by Von Karman almost 20 years ago. This airplane is possible and it must be built.

7. Mobile Air Defense: Through the utilization of an airplane like the CXX, it would be possible to have long range radar, radio

directed and infra-red homing missiles, air to air, air to ground, air to space, effective against aircraft, air to ground missiles, and submarine launched missiles.

8. A hypersonic mach 6, 4,000 mile an hour reconnaissance aircraft.

Thus, if we aggressively exploit present technology, we can have survivable forces in being which will provide:

1. Effective deterrents at any and all levels of intensity.

2. Multiple options throughout the entire spectrum of warfare.

3. Capability to respond in a controlled and decisive manner.

4. The ability to prevail at the level of conflict chosen.

5. The ability to use escalation as a tool; we to dictate, not merely to respond.

6. Manned weapon system with positive control and properly selected warheads permitting: (a) careful identification of target; (b) extreme accuracy; (c) the ability to limit collateral damage to ourselves, our allies, and our enemies.

7. Ready adaptability to satisfactory war termination policy.

8. Adaptability to realistic arms control measures.

9. And finally, a reliable communication system providing absolute command and control.

Science and technology, if we exploit the high payoff concepts will enable our Military Establishment and particularly the Air Force to accomplish its mission of supporting national policy.

The obvious conclusion is that our national security and our national welfare, in future, will depend very largely on military technology and, of course, as always, on the spirit and will of our citizens. Our Nation must become and remain superior in science and technology. We must have more and better scientists and engineers. This is one of the very important challenges to Pennsylvania Military College and to all of the other fine educational institutions of our land.

Thank you.

HALF COMMITMENT IN SOUTH-EAST ASIA

Mr. SIMPSON, Mr. President, nowhere in the world is American prestige more deeply committed to an ambiguous objective than in Vietnam. A distinguished theologian, Dr. Charles Wesley Lowry, who edits "The Blessings of Liberty" for the Foundation for Religious Action in the Social and Civil Order, has written an excellent treatise on the deepening dilemma in southeast Asia. In it he likens the folly of our half commitment in Vietnam to that of our half commitment in Korea, and he deduces that "it is time in Asia we break out of the pattern of inconclusiveness and unpurpose bequeathed by the Korean conflict."

Dr. Lowry has authorized a thought-provoking and perceptive article on the war in Vietnam, entitled, "Deepening Dilemma in Southeast Asia" and I ask unanimous consent that it be printed at this point in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

DEEPENING DILEMMA IN SOUTHEAST ASIA

Things appear to be coming apart at the seams in southeast Asia.

In estimating the forces at work and the probable or possible consequences, it is necessary to look before and after, and to take a long view.

The final passing from the stage of Gen. Douglas MacArthur, and the flareup of old controversies and issues occasioned by the publication of interviews given a decade ago, are reminders of the existence of abiding factors in world affairs.

MacArthur was the apostle of the priority of the Orient. He saw with a clear vision that as China went Asia would go. He wanted a solution and not a ceaseless stalemate in the Far East.

He was overruled. The counsels of the diplomatic trimmers and appeasers prevailed. The period of living from hand to mouth in terms of Asian policy was inaugurated and has since been maintained. Melancholy monuments of this policy are the partition of Korea, the collapse of French rule in Indochina; the partition (as with Korea) of Vietnam into Communist and free sectors, the attempted neutralization of Laos, the appeasement of Sukarno in relation to Dutch New Guinea, and the American-inspired overthrow of the Diem regime in free Vietnam.

One should perhaps add, the holding on the leash all this time of Chiang Kai-shek, for clearly our policy has been not to threaten or assail at a weak point the Communists on the Chinese mainland, even though we stood behind a "Republic of China" regime on Formosa and spared neither money nor pains to assist the development of an economic showcase on this island.

Things never stand still for long. The maintenance of the defensive permanently is a moral impossibility. This is the inevitable disadvantage of containment as a doctrine. It is therefore hardly a surprise that the terrible patience of the Communists is paying off in southeast Asia.

Everybody knows how high the stakes are in this area and this situation. We know it. The Communist high command, located where it can be sure in Peiping not in Hanoi, knows it.

At issue is (a) rice-rich, relatively underpopulated territory, greatly coveted and needed by the Chinese; (b) American will and prestige as the standard bearer of freedom in a global conflict; and (c) the control and destiny of Asia, the giant of continents.

The United States, as the result of drifting, misjudgment, weak counsel from allies, and too deep an acceptance of limitation and passivity in policy, finds herself in the valley of decision. We are deprived of the luxury of further postponement. We are backed up against the edge of a most dangerous divide.

The Chinese believe, with some reason, that we are a "paper tiger." They, on the other hand, have come through the ordeal of the communes crisis and they have not shrunk from standing up to Khrushchev and his rockets. To them he is the betrayer of the revolution, a cowardly capitulationist, a collaborator with the imperialists, a Bible-quoting psalm singer with the soul of a Buddhist, not a true Communist. He is also "a lunatic."

Of course, the Soviets in retaliation have called Mao Tse-tung "a maggot and an idiot." But the latter appears to have the initiative in the new cold war within the Communist camp. One indication of this is inability or unwillingness on the part of the Soviet dictator either to master or to get out of the southeast Asia melee. The fundamental factor is Chinese will. And the well tried method of the war, be it remembered, is that which Mao invented and which bears his patent throughout the Communist orbit and the world. As a guerrilla he survived and rose to mastery over 600 million people.

The American dilemma is severe and is unlikely to lessen. Indeed time can hardly be on our side in the distant Asian scene. On the one hand, there looms the specter of Chinese intervention, if we step up the war, and the nightmarish possibility of a

second installment of the Korean conflict, with Chinese hordes pouring down to grapple with our thin lines. On the other hand, unless the moral and psychological tide can be turned speedily and markedly, in free Vietnam and in Laos, we shall almost certainly have the ground cut out from under our feet and have to capitulate ignominiously by leaving on the invitation of erstwhile allies.

Predictably we are seeking some middle way out of this dilemma, and continuing to think wishfully that something may still turn up. What must be done, it seems to us, is to take a long look at China, at Asia, and at American interests. Then our leaders must have the courage to lead. They must decide what prudent action is necessary in order, not only to avert present disaster, but to influence the course of future events.

The Nation is ready and able for such action. It is surely safer to act now rather than pursue the path of appeasement. It is doubtful, whether the time and background will ever be more favorable. Thanks not to our own merits or achievements, save in defense preparations, but to the strains and ruptures of the Communist monolith, the risk of action is minimal.

It is time that in Asia we break out of the pattern of inconclusiveness and unpurpose bequeathed by the Korean conflict.

CHARLES WESLEY LOWRY.

THEY ARE LISTENING TO BARRY GOLDWATER

Mr. SIMPSON. Mr. President, in the softly fading echo of the last hurrah from Atlantic City, I should like to bring to my colleagues' attention a most perceptive and salient editorial written by Bruce Kennedy, editor and publisher of the Greybull Standard-Tribune.

Writing of the Republican National Convention at San Francisco, Publisher Kennedy noted that "America is at last listening to BARRY GOLDWATER." He said Americans are listening "despite intentional misrepresentation by a press ignoring its basic obligation to objectivity."

Bear in mind that this man is himself an outstanding member of the press. The Standard Greybull Tribune has for the second consecutive year been chosen as 1 of the top 6 newspapers in the United States in the under 2,000 circulation category, and the paper's exemplary editorials are among the most effective opinion formers in the Equality State.

Publisher Kennedy went on to assert that Americans are "listening despite a bunch of liberal tripe about warmongering and turning back to the 18th century. They are listening despite misguided political columnists who have seen no good in what the right conservative wing believed and no wrong in what the liberals have done."

In a beautifully drawn allusion to the late President Kennedy's classic "Ask not what your country can do for you, but what you can do for your country," Editor Kennedy noted that Senator GOLDWATER has himself been speaking and performing in the context of the do-for-your-country remark for a good many years. However, "in the eyes of the liberals, the prejudiced press, and the eastern establishment, the wrong person is saying it. When Kennedy did, it was a masterpiece. When GOLDWATER did, it is turning the country backward."

I ask that the July 23 editorial from

the Greybull (Wyo.) Standard Tribune be printed in the RECORD as a part of my remarks.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THEY'RE LISTENING

San Francisco proved that America is at last listening to BARRY GOLDWATER.

Americans are listening despite intentional misrepresentation by a press ignoring its basic obligation of objectivity. They're listening despite a bunch of liberal tripe about warmongering and "turning back" to the 18th century. They're listening despite misguided political columnists who have seen no good in what the right, conservative wing believed and no wrong in what the liberals have done.

It has been baffling for conservatives to understand this complete denial of beliefs and philosophies just because they were espoused by the right and not the left. If the liberals introduced them, they were progress; if the right, disaster. And the press—with its double standard of press coverage—has been a willing accomplice.

The world hailed John Kennedy's Cuban blockade. And although he took it off too soon to have its full effectiveness, J.F.K. made his point to the Russians. Yet wasn't this brinkmanship? Didn't this bring America to the edge of war with the Russians? John Foster Dulles could not have done it better. Nor could any action have been a better example of the philosophy of GOLDWATER for handling similar situations. This was the brinkmanship the liberals so abhorred in Dulles in his day and GOLDWATER now in his. Yet because J.F.K. did it, it was "statesmanship." With GOLDWATER it is warmongering.

J.F.K.'s inaugural statement about "asking not what your country can do for you but what you can do for your country" quickly became a classic. Despite the fact that Kennedy made a hypocrite of its finely stated theme by immediately demanding more Federal aid to education, more Federal housing, more public debt, more Government services and programs, the statement will be remembered as long as J.F.K. is. Yet when GOLDWATER's basic philosophy of government is precisely that, when he speaks of it on dozens of different occasions, when he votes in Congress exactly that way, when he demands more individualism and less dependence upon government, he is accused of 18th century provincialism and 20th century extremism. In the eyes of the liberals, the prejudiced press and the eastern elements, the wrong person is saying it. When Kennedy did, it was a masterpiece; when GOLDWATER did, it's "turning the country backward."

There will be a battle over civil rights in this campaign despite the honest efforts of both Johnson and GOLDWATER to keep it out. Republicans will be accused—nay they already have—of being against the Negro. Yet nearly 100 years of Democratic Party rule in the South prevented the Negro from voting. Not Republican. It was Democratic filibusters for years that prevented any civil rights legislation, including the filibuster of 1964. The civil rights platform that came out of San Francisco last week is being criticized. Yet the platforms of the Democrats on civil rights have always been farces when one entire section of Democratic votes believed—and practiced—the opposite way. And without this section there could not be Democratic victories.

But despite all of this, America, as San Francisco showed us, is listening to BARRY GOLDWATER.

Of course the columnists and the political "observers" back East, the liberal magazines, the poll takers are all predicting a Johnson landslide. And that GOLDWATER doesn't